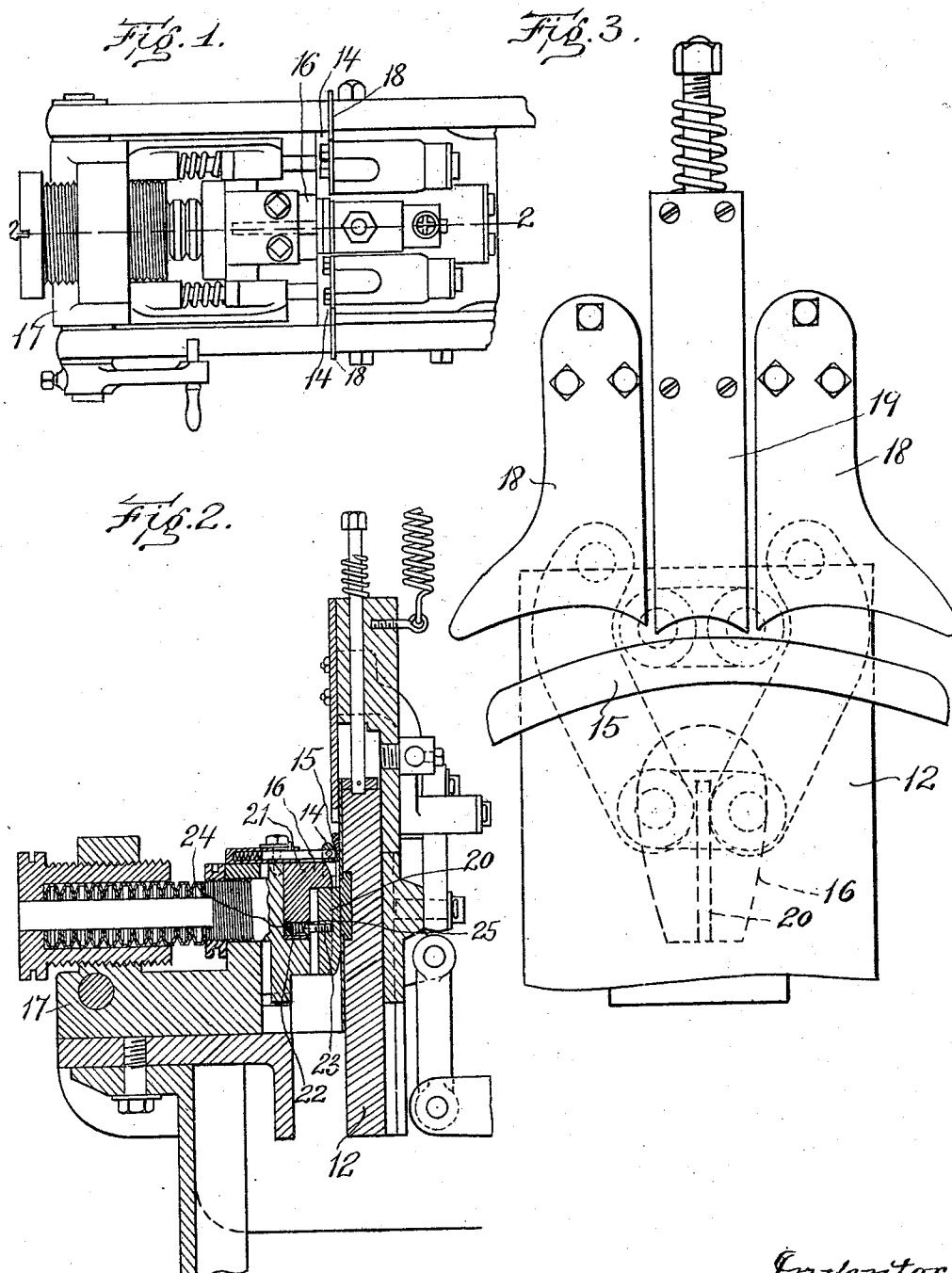


A. C. HEATH.
MACHINE FOR MAKING HEEL BANDS.
APPLICATION FILED DEC. 16, 1908.

966,687.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.



Witnesses:
F. R. Roubert
P. N. Pizzetti

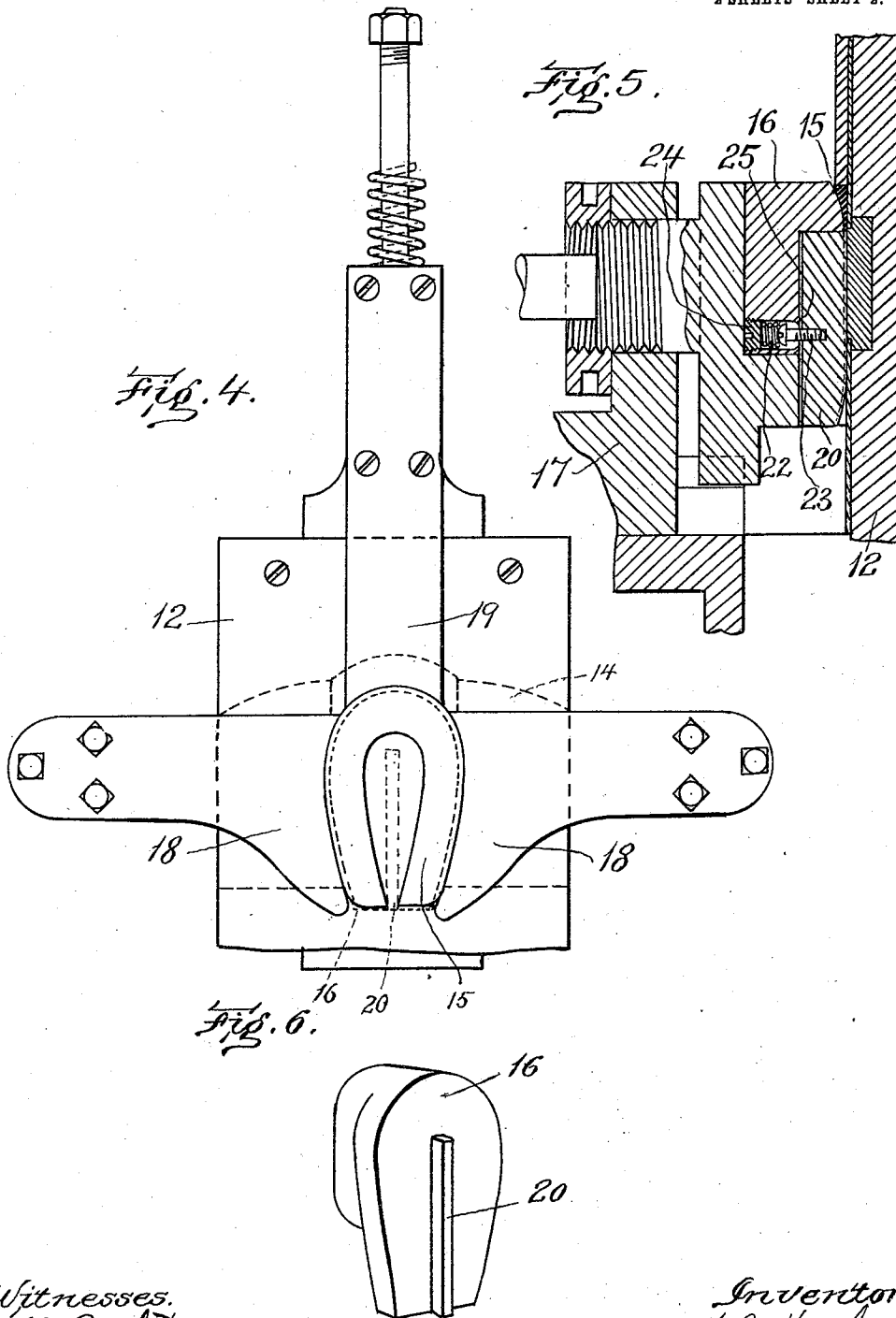
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Witnesses.
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UNITED STATES PATENT OFFICE.

AMASA C. HEATH, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO F. M. SHAW & SON, CORPORATION, OF BROCKTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

MACHINE FOR MAKING HEEL-RANDS.

966,687.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed December 16, 1908. Serial No. 467,755.

To all whom it may concern:

Be it known that I, AMASA C. HEATH, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Machines for Making Heel-Rands, of which the following is a specification.

This invention relates to machines for bending a heel rand strip into heel shape, and pressing and compacting the bent strip to make its shape permanent and give it the desired uniformity of cross-section throughout its entire length, the type of machine to which the invention relates being shown in Letters Patent of the United States, No. 724,700, dated April 7, 1903. In said machine the principal parts are a fixed head which constitutes a support against which a rand strip is held in such manner that it is adapted to be bent into heel shape while in contact with the head, formers adapted to bend the strip into heel shape while it is in contact with the head, and a heel-shaped follower adapted to act on the bent strip and exert forming pressure on the same, the follower coöperating with the head in imparting to the bent strip the desired shape in cross-section.

It has been found that the ends of the strip, while the latter is being bent, are liable to interfere with each other to such an extent that one end often overlaps the other, the result being a distortion of the completed rand, and injury both to the rand and the machine from the excessive thickness interposed by the overlapping sections of the strip between the head and the follower.

The present invention has for its object to overcome this difficulty, and it consists in a rand-forming machine of the general character above described, in which a stop is yieldingly projected between the acting surfaces of the head and follower, said stop being adapted to prevent interference between the ends of the bent strip, and being retractable by pressure against one of said parts when one part approaches the other to press the strip, the stop being preferably yieldingly mounted in a recess in the follower and normally projected therefrom by a spring, so that it is adapted to be retracted into the recess by contact with the head.

Of the accompanying drawings, forming a part of this specification,—Figure 1 rep-

resents a top plan view of a portion of a rand-making machine, to which my invention is applicable. Fig. 2 represents a section on line 2—2 of Fig. 1. Fig. 3 represents a side elevation of the head and the strip-bending formers, the latter being retracted, and the position of the follower being shown in dotted lines. Fig. 4 represents a view similar to Fig. 3 showing the bending formers projected to bend the strip. Fig. 5 represents a view similar to a portion of Fig. 2, showing the follower projected and the stop retracted. Fig. 6 represents a perspective view of the follower and stop.

The same reference characters indicate the same parts in all the figures.

In the drawings, 12 represents a head which is a stout metal plate affixed to a supporting frame.

14, 14 represent sections collectively forming a presser foot, said sections being movable toward and from the head 12, and provided with means, as described in the above mentioned patent, whereby they are normally pressed toward the head, said sections being adapted to coöperate with the head in supporting a rand strip 15 interposed between the sections and the head while the formers, hereinafter described, are bending the strip into heel shape.

16 represents a heel-shaped follower which is mounted on a slide 17 (Fig. 1) movable in guides on the supporting frame, and provided with operating mechanism whereby it is moved toward and from the head 12, said operating mechanism having provisions for holding the follower stationary, first when the follower is separated from the head to afford room between the head and follower for the bending of the strip, and secondly, when the follower has been moved up to the head to impart forming pressure to the strip, all as set forth in the above mentioned patent.

18, 18 represent the secondary formers, and 19 the primary former, said formers being constructed and operated as described in the above mentioned patent, mechanism being provided for holding the formers in the retracted position shown in Fig. 3 prior to the bending of the rand strip, and for moving them to the position shown in Fig. 4 to impart the desired heel contour to the strip. The strip is inserted between the head 12 and the presser foot sections when

the formers and the follower are retracted, as shown in Figs. 1, 2, and 3, the presser foot sections holding the strip in the position shown in Fig. 3 until the formers are projected. During the movement of the formers from the positions shown in Fig. 3 to those shown in Fig. 4, the strip is yieldingly confined between the head and the presser foot sections so that its outer edge conforms approximately to the inner edges of the formers. After the strip has been bent, as shown in Fig. 4, the follower is projected as shown in Fig. 5, the bent strip being thus subjected to pressure between the head and the follower, and given the desired form in cross-section.

There is nothing new, so far as the present application is concerned, in the mechanism or the operation above described, the same being as set forth more fully in the above mentioned Letters Patent to which reference may be made for a complete detailed description.

In carrying out my invention, I provide a stop 20 which is adapted to prevent interference between the ends of the strip while it is being bent into heel shape by the formers 18 and 19. In other words, the former is adapted to prevent either end of the strip from overlapping the other, and thus forming a double thickness between the head and the follower. The stop is a metal bar which is yieldingly projected between the follower 16 and the head 12 when the follower is retracted, and is arranged to constitute a barrier between the ends of the strip, and to prevent said ends from coming in contact with or overlapping each other, the position of the stop relatively to the bent strip being indicated by dotted lines in Fig. 4. The stop is yieldingly supported in one of the parts termed respectively the follower and head, and bears yieldingly against the other part when the parts are separated, the stop being adapted to be retracted within the part by which it is supported by pressure of the other part against it.

In the embodiment of my invention here shown, the stop is movably mounted in a recess 21 in the follower 16, and is yieldingly projected by the spring 22, so that it bears normally against the opposing face of the head 12. The stop extends across the space between the follower and head when the follower is retracted, and is pressed into the recess 21 by pressure against the head when the follower is projected, as shown in Fig. 5. As here shown, the stop 20 has a headed stud 23 projecting from its face into a recess in the body of the follower 16, said recess containing the spring 22 and a removable screw plug 24 which constitutes an abutment for the spring 22. The spring-contain-

ing cavity has a contracted mouth 25 which engages the head of the stud 23, and prevents the stop from being removed outwardly from the recess 21.

By the described improvement, all liability to interference between the ends of the strip and the objectionable results arising from such interference are obviated.

It will be observed that the stop 20 is entirely independent of all rand-shaping members, and therefore has nothing to do with the formation of the rand. The area of said stop is such as to leave a space around it, between it and the inner edge of the formed rand, so that it presents no obstacle to the proper bending of the rand strip even if the latter should be somewhat wider than normal. Only the inner edges of the extreme ends of the rand strip ever contact with the stop.

I claim:

1. A rand-making machine comprising a head, means for bending a rand strip in contact with the head, a follower opposed to the head and adapted to exert forming pressure on the bent strip, and a stop which is entirely independent of the rand-shaping members, and is yieldingly projected between the head and follower and adapted to prevent interference between the ends of the bent strip, said stop being retractable by pressure against one of the parts between which it is normally projected, the stop being formed to occupy the interior of a bent rand without contacting with the central portion of the inner edge of the rand.

2. A rand-making machine comprising a head, means for bending a rand strip in contact with the head, a follower opposed to the head and adapted to exert forming pressure on the bent strip, said follower having a recess in its acting face, and a spring-projected stop which is entirely independent of the rand-shaping members, and is movable in said recess and adapted to prevent interference between the ends of the bent strip, said stop being retractable into the recess by contact with the head, the stop being formed to occupy the interior of a bent rand without contacting with the central portion of the inner edge of the rand.

3. A rand-pressing follower having a stop yieldingly projected from its acting face, the stop being independent of the rand-shaping portion of the follower and formed to occupy the interior of a bent rand without contacting with the central portion of the inner edge of the rand.

In testimony whereof I have affixed my signature, in presence of two witnesses.

AMASA C. HEATH.

Witnesses:

L. A. RANDALL,
H. L. SANDS.